

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number
WO 2005/072272 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/US2005/002029

(22) International Filing Date: 21 January 2005 (21.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/538,805 23 January 2004 (23.01.2004) US
60/543,880 12 February 2004 (12.02.2004) US
60/572,240 18 May 2004 (18.05.2004) US

(71) Applicant (for all designated States except US): NEW ENGLAND BIOLABS, INC. [US/US]; 32 Tozer Road, Beverly, MA 01915 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MAINA, Claude, V. [US/US]; 837 Main Street, West Newbury, MA 01985

(US). TZERTZINIS, George [GR/US]; 10 Worcester Street, #2, Cambridge, MA 02139 (US). KUMAR, Sanjay [US/US]; 83 Old Right Road, Ipswich, MA 01938 (US).

(74) Agent: STRIMPEL, Harriet, M.; New England Biolabs, Inc., 32 Tozer Road, Beverly, MA 01915 (US).

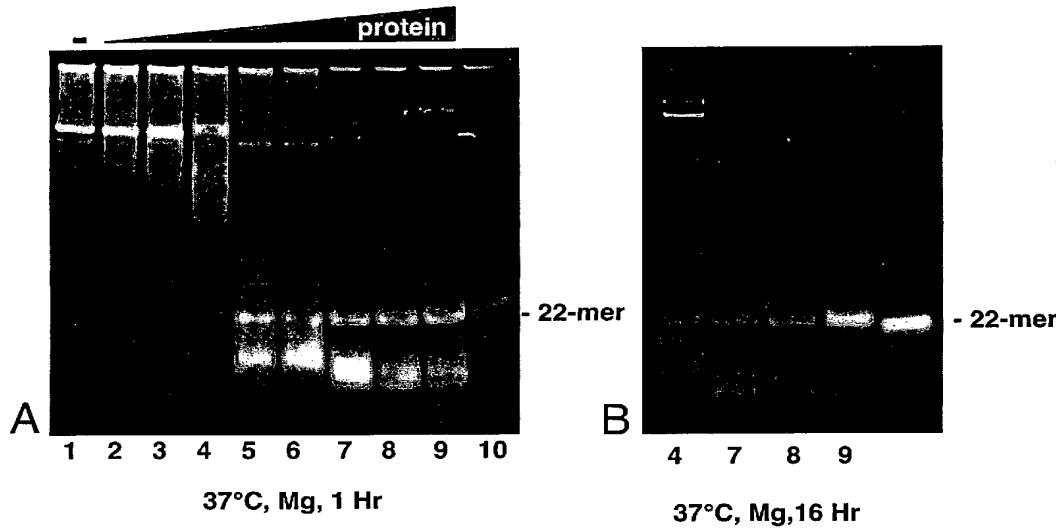
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: COMPOSITIONS AND METHODS FOR GENERATING SHORT DOUBLE-STRANDED RNA USING MUTATED RNASE III

RNAse Activity of E38A



WO 2005/072272 A2

(57) Abstract: Compositions and methods are provided for preparing an hsiRNA mixture and for silencing gene expression *in vivo*. The composition relates to a mutant RnaseIII. The methods are directed to reacting a preparation of dsRNA with an effective amount of a mutant RNase III to produce the hsiRNA mixture.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*